Ichnology of Ordovician Bukówka Formation based on Międzygórz and Mójcza sectionthe (Holy Cross Mountains, central Poland)

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The Bukówka Formation cropping out in the Kielce Block of the Holy Cross Mountains at Międzygórz and Mójcza was analysed. This area belongs to the larger structure called the Małopolska Block, which was situated on the Baltica margin during the Ordovician (e.g., Cocks, 2002). The Bukówka Formation consists mostly of fine-grained quartz-sandstone beds with local siltstone intercalations deposited during the Middle Ordovician (Trela, 2006). Most of the sandstone beds display nearly completely bioturbation (ichnofabric index 4-5 sensu Drosser & Bottjer, 1986). Primary sedimentary structures are rare. They are and represented by low-angle cross-lamination, wave ripple cross-lamination and horizontal lamination. Sedimentary features suggest a general low sedimentation rate and high degree of sediment reworking. Trace fossils are poorly preserved and low diverse, mainly due to high bioturbation. Determination of most of the trace fossils is difficult or impossible. The trace fossils contain horizontal pascichnia, including *Planolites montanus*, *P. beverleyensis*, *Planolites* isp., *Cruziana* isp., and *Teichichnus* isp. Besides, vertical domichnia represented by *Skolithos* isp. and ?*Monocraterion* isp. are present. The analysed trace fossil assemblage is typical of the archetypal *Cruziana* and partly *Skolitho*s ichnofacies (sensu Seilacher, 1970). Some of beds contain abundant Orthidae brachiopods (*Orthis* spp. and *Orthonambonites* sp.). Clastic sedimentation was replaced by carbonate sedimentation toward the top of the formation. This negatively influenced preservation of the trace fossils, which have the highest preservation potential in heterolithic siltstone-sandstone deposits. Trace fossils and sedimentary structures recognised suggest deposition of sandy material on the middle and lower shoreface with a possible influence of storms (cf. Pemberton *et al*., 2001).

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